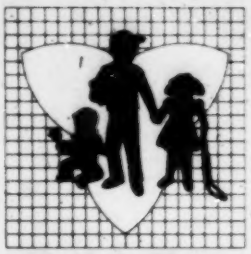

Child Care

Highlights Paper

Factors Related to Quality in Child Care:

A Review of the Literature

Ministry of Community and Social Services
Ontario

March 1991

HIGHLIGHTS PAPER

FACTORS RELATED TO QUALITY IN CHILD CARE:

A REVIEW OF THE LITERATURE

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INTRODUCTION

Following the lead in **New Directions for Child Care** (Ministry of Community and Social Services, 1987), quality child care is defined for the purposes of this paper as that which supports and facilitates the child's physical, emotional, social, and intellectual well-being and development and supports the family in its child-rearing role. The issue of which factors in child care are associated with quality is important because of:

- the number of children in some type of substitute care situation. In 1989, an estimated 1,275,756 mothers in Canada with children under age six were in the paid labour force (National Child Care Information Centre, Health and Welfare, Canada, 1990);
- the likelihood that in Canada the workforce participation of mothers with preschool children will increase, with a resultant increase in the use of child care (Friendly, 1986; Lero & Kyle, 1989; Pence & Goelman, undated); and
- the growing body of research which indicates that poor quality child care has detrimental effects on the child's physical health (Black et al., 1981; Pickering et al., 1986) and emotional and social well-being and development (Francis & Self, 1982; Howes, 1983; Howes, 1990; Peterson & Peterson, 1986; Vandell & Powers, 1983).

This highlights report summarizes the findings of an extensive review of research studies conducted in Canada, the United States, Bermuda, England, New Zealand, and Western Europe, and interviews with 52 key informants (see Appendix A). A more detailed report is also available and an annotated bibliography which provides specific information on the sample, methodology, and degree of significance of findings for the research studies cited in this report.

QUALITY AS A GLOBAL CONSTRUCT

As a global construct, quality is determined either by the use of an established and validated global rating scale, such as the Early Childhood Environment Rating Scale (Harms & Clifford, 1980), or by combining a number of discrete indicators into a composite measure, e.g. caregiver-to-child ratio, caregiver training, and group size. Research studies have shown that programs with a high global rating of quality are associated with children who have:

- greater social competency (Bjorkman et al., 1986; Howes, 1990; Kontos & Fiene, 1986; Phillips et al., 1987a; Vandell & Powers, 1983; Vandell et al., 1988);
- higher levels of language development (Goelman & Pence, 1988; Peterson & Peterson, 1986; Phillips et al., 1987a);
- higher developmental levels of play (Bjorkman et al., 1986; Howes, 1990; Howes & Stewart, 1987; Vandell & Powers, 1983);
- better ability to self-regulate (Howes, 1990; Howes & Olenick, 1986; Phillips et al. 1987);
- greater compliance (Howes & Olenick, 1986); and
- fewer behaviour problems in grade school according to teacher perception (Howes, 1990).

DISCRETE INDICATORS OF QUALITY

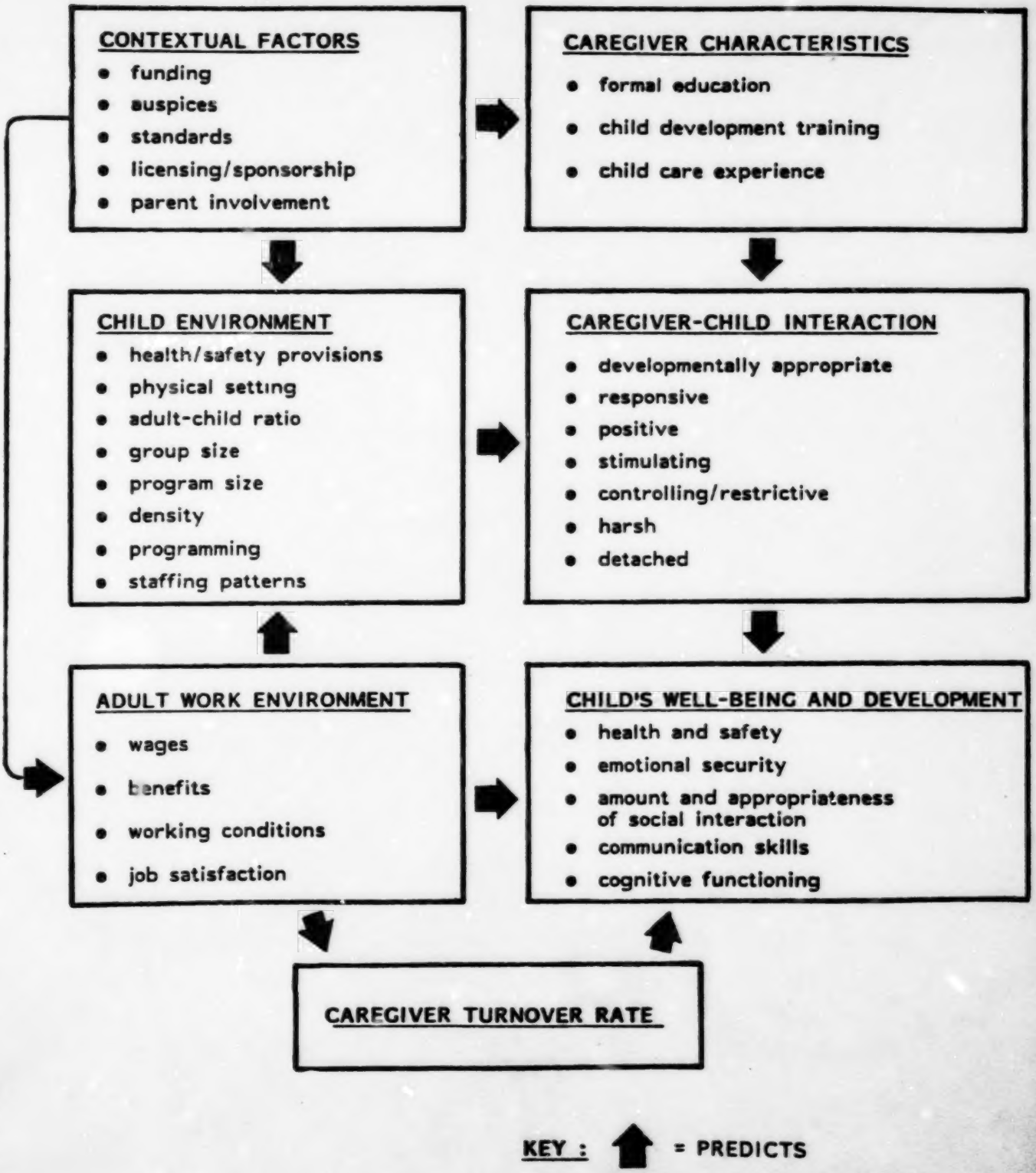
Quality can also be examined by comparing randomly selected programs to determine the children's experience and development in them and then relating the findings back to differences in discrete program characteristics. Studies which use this approach enable a more precise identification of what it is about a program which has the desired effect. In reading through the reports of research studies of this type it is evident that:

- individual indicators of quality can be grouped into categories, for example, caregiver formal education, child care specific training, and experience in child care can all be categorized as caregiver characteristics; and
- there is a relationship between categories, for example, caregiver characteristics have been found to predict the level and quality of caregiver and child interaction.

For ease of reading, the impact of discrete indicators will be discussed separately. However, it is essential that the reader keep in mind that indicators operate in an interactive fashion. The diagram on the following page, which is a modification of that presented by Whitebook et al (1990), illustrates the categories, and their indicators, which will be discussed in this paper. It also illustrates the way in which categories influence each other.

DIAGRAM 1

MODEL FOR EXAMINING QUALITY IN CHILD CARE



THE INTERACTION BETWEEN CAREGIVER AND CHILD

Responsiveness/non-responsiveness

Caregivers who are responsive react appropriately and promptly to the children's verbal or non-verbal bids for attention and initiate activities which are geared to the child's developmental level. Research has found statistically significant positive relationships between responsive caregivers and children's cognitive and language development (Carew, 1980; Rubenstein & Howes, 1983; Whitebook et al., 1990) and social competence (Holloway & Reichhart-Erikson, 1988; Rubenstein & Howes, 1983; Whitebook et al., 1990). Children with non-responsive caregivers have been found to show higher rates of aimless wandering than children whose caregivers are responsive (Rubenstein & Howes, 1979; Whitebook et al., 1990), poorer language development (Melhuish et al., in press, b), and poorer social skills (Rubenstein & Howes, 1979).

Positive caregiver interaction

Caregivers with high levels of positive interaction show active interest in the child's activities and provide ample encouragement. When children whose caregivers show high levels of positive caregiver interaction are compared with children experiencing lower levels they have been found to show greater emotional security (Anderson et al., 1981), higher levels of language development (Carew, 1980; Golden et al., 1978; Howes, 1990; Ruopp et al., 1979; Whitebook et al., 1990), more advanced cognitive development (Carew, 1980), better task orientation (Howes, 1990), and lower levels of aimless wandering (Whitebook et al., 1990).

Caregiver informative verbal exchange with children

Caregiver informative verbal exchange refers to giving reasons or explanations, reading to children, etc. The amount of caregiver informative verbal information experienced by the child has been found to be significantly associated with the level of the child's language skills (Carew, 1980; McCartney, 1984; Melhuish et al., in press, b; Phillips et al., 1987; Rubenstein & Howes, 1983), social competence (Clarke-Stewart, 1981; Clarke-Stewart & Gruber, 1984; Phillips et al., 1987), and cognitive development (Carew, 1980).

Caregiver controlling or restrictive behaviour

Research has found that caregiver restrictive or controlling behaviour is associated with children who have poor language development (Berk, 1985; Carew, 1980; Clarke-Stewart & Gruber, 1984; McCartney, 1984), poor performance on cognitive tests (Clarke-Stewart, 1989), and later problem behaviours (Rubenstein & Howes, 1983).

Caregiver harshness

Harsh caregivers are critical with the children, scold or threaten them, and/or use punishment as a means of discipline. Children with harsh caregivers have been found to show higher levels of aimless wandering than do children whose caregivers are not harsh and to have lower levels of attachment to the caregiver (Whitebook et al., 1990).

Caregiver detachment

Detachment refers to an observed lack of involvement with the child. It has been associated with children who show high rates of aimless wandering, poor language development, and developmentally less complex levels of play with peers (Ruopp et al., 1979; Whitebook et al., 1990). Conversely, a high level of involvement with the child has been associated with child attachment to the caregiver and willingness to explore a strange environment (Andersson et al., 1981). Such exploratory behaviour is believed to have a positive impact on cognitive development.

CAREGIVER CHARACTERISTICS

The three indicators of quality in the caregiver characteristics category are: years of formal education; the presence or absence of specific training in child development or early childhood eduction; and years of experience as a child care provider.

The impact of formal education and/or child care-related training

Research indicates that caregivers with some college education and/or post secondary school training in child development or early childhood education exhibit higher rates of positive caregiver

behaviours than do caregivers with only a high school diploma or less (Arnett, 1987; Berk, 1985; Fosburg, 1981; Howes, 1983; Ruopp et al., 1979 Stuart & Pepper, 1988; Whitebook et al., 1990). They are also more likely to provide developmentally appropriate activities for the children they are looking after (Goelman & Pence, 1988; Howes, 1983; Kaplan & Conn, 1984; Ruopp et al., 1979; Whitebook et al., 1990). Furthermore, children in their care receive higher scores on measures of social functioning and other aspects of child development than do children whose caregivers do not have post secondary school education or specific child care-related training (Clarke-Stewart & Gruber, 1984; Goelman & Pence, 1989; Howes & Olenick, 1986; Ruopp et al, 1979; Vandell & Powers, 1983). It should be noted that the studies cited above which were conducted by Fosburg (1981), Goelman & Pence (1989), and Stuart & Pepper (1988) relate to family-based child care.

There has been some debate in the child care field as to whether years of formal education per se or child care-related training is the crucial factor. Some studies have appeared to suggest that years of formal education is the more potent predictor of good quality child care (Berk, 1985; Clarke-Stewart & Gruber, 1984; Whitebook et al., 1990). However, a close look at the reports from these studies shows that the conclusions have been confounded by including a high proportion of people in the "formal education" rather "child care-related training" caregiver group whose college education included courses in child development or early childhood education (Berk, 1985; Whitebook et al., 1990). Other studies (Ruopp et al., 1979; Stuart & Pepper, 1988) and discussions with various key informants suggest that:

- there is a need for preparation at the post secondary school level. Good child care in a group situation requires the ability to interpret situations and respond appropriately. Rote application of concepts learned in school is not adequate; and
- early childhood education training is essential but must be based on a careful thinking through of what is required for quality child care.

The research literature and key informants agree that:

- caregivers require specific training related to the age group for which they are responsible. Different ages face different developmental tasks and have different needs;
- caregivers looking after children who have special needs require additional training related to the type of child to be served;
- programs for native children should be staffed by native caregivers and training programs for native caregivers should include recognition of native child-rearing practices; and

- supervisors and directors require additional training in administration and personnel management.

Experience

The research findings regarding the contribution of caregiver experience in child care are mixed. Some studies have found that caregivers with long experience are more responsive than those with less experience. Other studies have found no difference between caregiver groups related to length of experience or that caregivers with longer experience are less responsive. Most studies do not link the caregiver's actual years of experience with the outcome observed. There may be a curvilinear relationship whereby some experience has a positive outcome but beyond a certain point may or may not, depending on whether or not there is caregiver burn-out.

THE CHILD ENVIRONMENT

The indicators of quality in the child environment category are: health and safety provisions; the physical setting; the caregiver-to-child ratio (number of children per caregiver); the group (class) size; the program size; density (square feet per child); the extent to which developmentally and culturally appropriate programming is available; and staffing patterns.

Health and safety

At a minimum, quality requires that the child be safe and protected from health hazards. Klein (1986), from the Department of Paediatrics at Boston University School of Medicine, notes that:

> "hand washing is the single most important technique for prevention of gastrointestinal and many respiratory infections. Compulsory hand washing after handling infants, blowing noses, changing diapers, and using toilet facilities should be expected of every caregiver."
>
> (page 112)

Black et al. (1981) were able to demonstrate a 50% decrease in diarrhea when child and caregiver hand washing was rigorously enforced in child care settings. Both the Canadian Paediatric Society and the American Academy of Paediatrics are in the process of developing health and safety standards for child care settings.

The physical setting

The Canadian Paediatric Society (1988) notes that the physical arrangement of the child care setting should reduce hazards, for example, by the use of barriers to prevent access to unsafe places, provide adequate lighting and ventilation, and avoid crowding and over-stimulation. The play area and entrances should be located away from traffic areas such as parking lots and streets. In situations where there are physically handicapped children present, the setting should have design modifications such as ramps and extra wide doors. Other writers have pointed out the value of a mixture of large and small rooms to accommodate different activities (The Association of Early Childhood Education, Ontario, 1988; Lero & Kyle, 1985). Clarke-Stewart & Gruber (1984) found that children who did well on their tests of cognitive skills and social competence came from child care environments which were safe, orderly, rich in toys and educational materials, and appropriately organized into activity areas.

The caregiver-to-child ratio

Research studies show that a small number of children per caregiver is associated with appropriate caregiving and the provision of appropriate activities (Whitebook et al., 1990); caregivers who are sensitive and responsive to the child (Howes, 1983; Howes & Rubenstein, 1985; Whitebook et al., 1990); caregivers who engage in more social stimulation (Biemiller at al., 1976; Howes, 1983) and provide more verbal and cognitive stimulation (Biemiller et al., 1976; Howes, 1983) than do caregivers with a larger number of children per adult.

A large number of children per caregiver is associated with:

- more incidents of infants exposed to potential danger (Ruopp et al., 1979);
- caregivers who are harsh (Whitebook et al., 1990), restrictive (Howes, 1983; Smith & Connolly, 1986), or detached (Whitebook et al., 1990);
- a higher percentage of caregiver time spent in controlling the children (Biemiller et al., 1976; Ruopp et al., 1979; Smith & Connolly, 1986) and in routines such as toiletting (Biemiller et al., 1976; Smith & connolly,1986); and
- higher levels of reported job dissatisfaction (Mashlach & Pinces, 1977).

As might be expected, the caregiver-to-child ratio not only effects the caregiver's behaviour it also has an impact on the child's behaviour. When there are few children per adult, children are rated as more considerate of others (Phillips et al., 1987); are found to be more compliant and more able to regulate their own behaviour (Howes & Olenick, 1986); and to engage less often in unoccupied behaviour (Holloway & Reichhart-Erikson, 1988; Vandell & Powers, 1983) than children in programs with many children per adult. Situations where there is a large number of children per adult have been found to be associated with children who have a short attention span and poor verbal skills (Schwartz, 1983); high rates of child negative behaviour towards peers (Smith et al. 1989); and infants who are apathetic and distressed (Ruopp et al., 1979).

Various groups of experts have addressed the issue of desirable caregiver-to-child ratios. In the United States, the consensus is: 1:3 for infants under one year of age; from 1:3 to 1:5 for children age one to three; from 1:7 to 1:9 for three-, four-, and five-year olds; and from 1:10 to 1:16 for school-aged children under age ten (Child Welfare League of America, 1984; the Federal Register, 1980; the National Association for the Education of Young Children, 1984). Recently, the Canadian Child Day Care Federation published a draft statement which included desirable ratios (1990).

Group size

The findings of research studies that have looked at the impact of group size have been contradictory. Five studies found that smaller groups are associated with more positive child outcomes, such as higher scores on standard language tests, than larger groups (Holloway & Reichhart-Erikson, 1988; Howes, 1983; Howes & Rubenstein, 1985; Ruopp et al., 1979; Smith & Connolly, 1986). One study reported both positive and negative outcomes associated with larger versus smaller groups (Clarke-Stewart & Gruber, 1984) and two studies found no association between group size and child functioning (Kontos & Fiene, 1987; Whitebook et al., 1990). In both studies where no difference was found, the size of the groups categorized as large was not much bigger than the size recommended by experts for children of that age. Therefore, it appears probable that smaller group size is preferable to larger group size.

Program size

Research from the United States has consistently found that large centres are more likely to be associated with undesirable caregiver behaviour and less positive outcomes for children than are small centres (Clarke-Stewart & Gruber, 1984; Prescott et al., 1967; Ruopp et al., 1979). Similarly,

large centre size has been associated with poorer quality on global rating scales (Kontos & Fiene, 1987; Jorde-Bloom, 1989).

Organizations such as the National Association for the Education of Young Children do not appear to have made recommendations in regard to program size. The research findings suggest that something much in excess of 60 is probably too impersonal and therefore vulnerable to becoming regimented.

Density

Conditions of high density have been found to be associated with higher rates of caregiver controlling and restricting (Perry, 1977) and lower rates of caregiver and child interaction (Vandell & Powers, 1983). A large number of children in the available space has also been found to have a negative impact on children's behaviour. Children in high density situations, when compared to those in lower density programs, tend to engage in more aimless unoccupied behaviour (Holloway & Reichhart-Erikson, 1988; Vandell & Powers, 1983), less cooperative or associative play with peers (Smith & Connolly, 1986; Rohe & Nuffer, 1977), to be more aggressive (Smith & Connolly, 1986), and to engage less frequently in activities requiring concentration (Rohe & Nuffer, 1977).

Two studies indicate that the relationship between density and caregiver or child behaviour may be curvilinear. Prescott et al. (1967) found that 70-90 square feet of outdoor space and 150 square feet or more were both associated with less caregiver sensitivity and higher rates of child uninvolvement in activities than occurred in situations of 90-150 square feet. Similarly, Shapiro (1975) found that child uninvolvement was greatest in classrooms with less than 30 square feet per child, second highest in classrooms with over 50 square feet per child, and least in classrooms where children had between 30-50 square feet per individual. Shapiro hypothesizes that children are uninvolved in high density situations because over-crowding causes difficulty focusing on an activity. In contrast, too much space is overwhelming and uninviting.

Programming

The presence of organized activities and routines, rather than simply free play, is associated with higher scores on tests of cognitive and/or language skills (Clarke-Stewart & Gruber, 1984; McCartney, 1984; Smith & Connolly, 1986). There appears to be no relationship between child

development and the curriculum provided (Clarke-Stewart & Gruber, 1984). This suggests that the crucial factor is structure rather than content.

Programming needs differ with the age of the child. Therefore, school-age children require a different program from preschoolers (Alexander, 1986; Bergstrom, 1984; the Child Welfare League of America, 1984; the Ten Plus Committee, 1989). Cultural appropriateness is also essential for a quality program. For example, programs involving native children should include native stories and games and be compatible with native child-rearing practices (Assembly of First Nations, 1989; Canning, 1986; Mayfield, 1984; Native Council of Canada, 1990).

Staffing patterns

Whitebook et al. (1990) found that caregivers in situations where there were overlapping shifts, thereby allowing for an exchange of information, showed behaviour that was more appropriate and less detached. Key informants expressed the opinion that a good way of getting parent involvement in a program is to set aside time at drop-off or pick-up for individual discussions between caregiver and parent. A staffing pattern which reduces the number of caregivers at these two times does not allow for this.

THE ADULT WORK ENVIRONMENT

The indicators of quality in the adult work environment are: wages and benefits; working conditions; and job satisfaction. The three interact with each other.

Salaries

Salaries at the high rather than low end of the continuum have been found to be associated with higher job commitment and lower staff turnover rates (Whitebook et al., 1982; Whitebook et al., 1990). The National Child Care Staffing Study found that salary was the best predictor of job satisfaction (Whitebook et al., 1990). Almost without exception, American and Canadian key informants identified low salaries as the major cause of qualified people leaving the field and the current difficulties attracting people into child care provision.

Working conditions

The second best predictor of job satisfaction found by the National Child Care Staffing Study was having time for program preparation during the paid hours of work (Whitebook et al., 1990). A relatively high number of children per caregiver (unfavourable ratio) was found to be associated with job dissatisfaction by Maslach & Pines (1977) and Whitebook et al. (1982, 1990). Provision of opportunities for input into centre policy and program development, regular staff meetings to discuss individual children and/or work issues, and regular provision of a short break in the morning and in the afternoon have all been associated with job satisfaction (Maslach & Pines, 1977).

Job satisfaction and dissatisfaction

Job dissatisfaction has been associated with caregiver history of abusive behaviour towards children (Haddock & McQueen, 1983) and caregivers with a high score on a test to measure potential for abusive behaviour (Atten & Milner, 1987); restrictive and controlling caregiver behaviour with children (Berk, 1985); and high staff turnover (Whitebook et al., 1982). High staff turnover rates, in turn, have been found to be associated with low ratings on the Early Childhood Environment Rating Scale and with children who perform poorly on a standardized test of language development (Whitebook et al., 1990).

CONTEXTUAL FACTORS

The contextual factors which impact on quality are: funding; auspices; standards; licensing/sponsoring in family-based child care programs; and parent involvement.

Funding

On the basis of their survey of 227 centres in five different American states, Whitebook et al. (1990) concluded that:

> "better quality centres paid higher wages, had more teachers caring for fewer children, employed better educated and trained staff, had lower teaching staff turnover, and better adult work environments."
>
> (page 112)

This conclusion has a clear financial impact, as does the research discussed in earlier parts of this paper. Quality requires sufficient funds to obtain and retain qualified caregivers, to provide favourable caregiver-to-child ratios and group sizes, and to ensure a safe environment which has adequate amounts of appropriate equipment and materials.

Auspices

Three Canadian studies have examined the relationship between quality as a global construct and auspices. When non-profit centres were compared with for-profit centres, for-profit status was associated with a greater likelihood of centres falling short of a government standard (SPR Associates Inc., 1986); having a provisional licence (West, 1988); or having complaints lodged against them (DeGagne & Gagne, 1988; West, 1988). Other Canadian studies have found that caregivers working in for-profit centres tend to earn less than those in non-profit centres (Association for Early Childhood Education, Ontario, 1986; Schom-Moffat, 1984) and that staff turnover rates are higher in for-profit centres (Dumais, 1986; Degagne & Gagne, 1988; Association for Early Childhood Education, Ontario, 1986). The findings of the American research are basically the same. For example, Whitebook et al. (1990) found that the annual turnover rates were higher, working conditions were poorer, caregivers were less satisfied with their jobs, caregiver educational levels were lower, and caregiver behaviour was more harsh in for-profit than in non-profit centres. It has been suggested that the difference usually found between for-profit and non-profit centres is a function of the absence of government subsidy in for-profit programs (Kagan & Newton, 1989; SPR Associates Inc. 1986). Whitebook et al. (1990) specifically looked at this possibility and found that non-profit centres, whether or not they received government funds, had higher scores on both appropriate caregiving and developmentally appropriate activities. They also spent a higher proportion of their budgets on the caregivers than did the for-profit programs.

Standards

The National Child Care Staffing Study (Whitebook et al., 1990) examined the relationship between compliance with the 1980 Federal Interagency Day Care Requirements (FIDCR) and various indicators of quality or child well-being. When centres meeting all the FIDCR provisions were compared to centres meeting none or only some of the provisions, the former were found to:

- o pay better salaries to caregivers;
- o employ caregivers who had more formal education and a greater amount of specific training in early childhood education;
- o have lower turnover rates;
- o have higher ratings on developmentally appropriate activity, fewer children per caregiver, and smaller group sizes; and
- o have caregivers who were more sensitive, less harsh, and who engaged in more appropriate caregiving.

Children attending centres meeting all or most of the FIDCR provisions engaged in more mature forms of peer play and had higher scores on tests of language development than did children in other centres. Centres which had been accredited through the National Association for the Education of Young Children showed the same characteristics as those who met all or nearly all the FIDCR requirements.

Licensing/sponsorship

Three Canadian studies have found that family-based child care homes which are sponsored by a licensed agency or operated by a caregiver who is licensed obtain higher scores on a standardized rating of global quality (the Day Care Home Environment Rating Scale) that do unsponsored or non-licensed situations (Goelman & Pence, 1988; Goelman & Pence, undated, Pepper & Stuart, 1989). In the United States, both Carew (1979) and Fosburg (1981) found that sponsored caregivers were more involved with the children they were caring for and engaged in more frequent teaching than did non-sponsored caregivers. The difference is probably a function of the likelihood that the sponsored caregiver has support from the sponsoring agency and that the caregiver who seeks a licence has a professional view about child care provision.

Parent involvement

Quebec and New Brunswick both have legislation which requires non-profit child care centres to have parent representatives on their board of directors. In Quebec, the rationale for this requirement is that parental involvement in operational decision-making increases the consistency

in values and practices between the child care centre and the home and assists parents to feel that they have not lost control over the education of their children (Guy, 1986). However, there appears to be no research which specifically addresses the impact of parents in a formal advisory or operational decision-making capacity.*

The issue of requiring parent participation at the board level was discussed with 14 of the Canadian key informants. A number of people pointed out that the fact that parent cooperatives are operated by parents does not mean that all child care programs should operate this way. Concerns were expressed that parents:

- may not have the time and/or energy to become informed board members, especially if both parents are working or in a single-parent situation;
- tend to be committed only for the time their child is in the program. This raises the problem of board consistency;
- may lack objectivity, for example, may find it difficult to raise salaries if this means an increase in fees; and
- often do not understand the role and function of a board of directors.

The professional literature and key informants agree on the importance of open and regular parent and caregiver communication (The Association for Early Childhood Education, Ontario, 1988; Cook et al., 1986; Powell, 1980; Smith & Hubbard, 1988). Some jurisdictions, such as California, require daily caregiver-parent communication and a minimum of twice a year formal conferences between the parent and the caregiver to review the child's progress (California State Department of Education, 1988).

A number of Canadian key informants expressed concern that parents misunderstand government's ability to guarantee basic safety, let alone quality, because they do not realize that the situation may change between government site visits. There is a need to educate parents that it is their responsibility to check for quality and to assist them to be able to judge if quality exists. A clearly understood and accessible mechanism to receive and address parent complaints is also necessary.

---

* The Municipality of Metropolitan Toronto is currently conducting a study to examine the impact of its child care centres' parent advisory committees (Marna Ramsden, personal communication.)

THE MEASUREMENT AND MAINTENANCE OF QUALITY

Measurement

Ruopp et al. (1979) suggest that measuring quality requires: examination of the extent to which the program has the "right" ingredients, e.g. caregiver-to-child ratio; the making of inferences about the child's experience; and determination of outcome. The first is relatively easy. Indicators such as caregiver-to-child ratio can be defined and measured. An inference about the child's experience can be made through an examination of what is taking place in the child care program. This can be done through the use of standardized observation instruments. Two which have been identified as having both good inter-rater agreement and being associated with positive outcomes are the Early Childhood Environment Rating Scale (Harms & Clifford, 1980) and the Early Childhood Classroom Observation Scale used by the National Academy for the Education of Young Children as part of its accreditation process. Determination of outcome is more difficult. Research has shown that children's scores on standardized tests, for example, for language development, are influenced by factors outside the child care setting. There are also concerns about the repeated testing of young children.

The maintenance of quality

As noted by Lero & Kyle (1985), mechanisms to maintain quality fall into three general categories: regulatory practice; voluntary standards of professional practice; and other non-regulatory methods. The diagram on the following page presents these categories and the various mechanisms that might be included within each.

a) regulatory methods

Regulatory methods include fiscal regulation (e.g. a purchase of service contract), licensing, and municipal by-laws. Licensing and municipal by-laws represent the baseline of what society will tolerate. The extent to which there is any relationship between quality and licensing depends on the extent to which the requirements for licensing go beyond the threshold below which a child is placed at risk. In spite of the above caveat, the presence and enforcement of basic standards is essential. Both Canadian and American research has found that children from stressed, disorganized families, the sort of family less likely to provide developmentally enhancing

DIAGRAM 2

MECHANISMS FOR PROMOTING AND SUSTAINING QUALITY CHILD CARE

REGULATORY METHODS

- fiscal regulation *
- licensing or registration
- zoning by-laws
- building standards
- medical officer of health requirements

SANCTIONS FOR

- illegal, unlicensed operators
- abusive or neglectful care
- violation of regulations or by-laws

VOLUNTARY STANDARDS OF PROFESSIONAL PRACTICE

- accreditation
- credentialing **
- peer review
- self review

OTHER NON-REGULATORY METHODS

- public education
- user education
- staff education and training
- parent and/or community advisory committees
- membership in professional associations
- consultation with other professionals
- resource and referral centres

KEY:

* mechanism used by a funding agency, for example a purchase-of-service contract, to define the quality it wishes to purchase

** a method to ensure caregivers have completed certain training and/or have demonstrated specific competencies

Adapted from: Morgan, G. "Regulation: One Approach to Quality Child Care", Young Children, 1979, September, page 26.

experiences, are more likely to be placed in low quality child care than are children from families with a higher functioning level (Howes, 1990; Howes & Olenick, 1986; Howes & Stewart, 1987; Goelman & Pence, 1988).

To be effective, standards pertaining to licensing and/or fiscal regulation must be: clearly and unambiguously worded; deal with indicators known to effect quality; observable, measurable, and enforceable; and enforced. Operationalization of licensing standards requires monitoring instruments with high inter-rater reliability. It is also desirable that the instrument used be based on specific, observable indicators. Such an instrument has been developed in the United States and is presently used as part of their licensing procedure by California, the City of New York, Michigan, Pennsylvania, Texas, and West Virginia (Children's Services Monitoring Transfer Consortium, 1981, 1985, 1988; Fiene, 1986; Fiene & Nixon, 1985). Manitoba uses the Early Childhood Observation Scale and Saskatchewan uses the Early Childhood Environment Rating Scale (Lois Brockman, Manitoba; Tara Truemner, Saskatchewan; personal communication).

Key informants noted that licensing can only be effective if there is: accessible, affordable caregiver training; monitoring which makes it necessary to adhere to the standards; and both rewards and sanctions. In particular, people stressed the importance of the representative of the regulatory body having the time to make unscheduled visits to ensure standards are, in fact, being met, and the importance of quick and predictable sanctions for non-compliance.

b) voluntary standards of professional practice

Voluntary standards include accreditation, credentialing, and self-evaluation. Accreditation is a process whereby a representative body, recognized by both the service community and the community in general, establishes standards for services. These are above the minimum requirements of the government. Programs apply on a voluntary basis for evaluation against the standards. Credentialing is a method which certifies that the individual has completed a specific training program and/or has demonstrated specific competencies.

Kontos & Stevens (1985) field tested the Early Childhood Environment Rating Scale in six centres to determine its usefulness as a self-evaluation tool. They report that the centres found it easy to use and that the specificity of the scales helped people to pinpoint exactly what needed attention. The Regional Municipalities of Halton and of York each use the ECERS as a self-evaluation tool

twice a year in their municipally-operated centres (Karen Chan, Halton; Doreen Gordon, York; personal communication).

c) non-regulatory methods

Morgan (1980) suggests that government efforts to achieve quality will not be supported until the public and users are educated to understand what is required and its cost. At the parent level, key informants noted that many parents do not realize that licensing is not a guarantee of quality. Therefore, they need to be informed about their responsibility to monitor the child care situation in which they have placed their child. To be effective in their monitoring role, parents need an understanding of what ingredients contribute to quality and how to determine whether or not it is present.

The research leaves no doubt about the correlation between formal staff training and quality. The value of in-service education has also been demonstrated both in regard to centre-based and family-based child care (Black et al., 1981; Goodman & Andrews, 1981; Jones & Meisels, 1987; Kaplan & Conn, 1984; Whitebook et al., 1990). The National Association for the Education of Young Children recommends that caregivers be supported to maintain their current knowledge of child development and its application in child care programs (Bredekamp, 1987).

GLOSSARY

Aimless wandering

The child is wandering around the setting as opposed to being engaged in a meaningful activity or play. This behaviour has been found to be correlated with poor language development and poor general knowledge (Ruopp et al., 1979).

Appropriate caregiving

As used in the National Child Care Staffing Study (Whitebook et al., 1990), this phrase refers to a group of items derived from the Early Childhood Environment Rating Scale (see description below) which pertain to child-caregiver interactions, supervision, and discipline, and to health and safety practices.

Caregiver-to-child ratio

The number of children per caregiver. A favourable ratio is one where the caregiver is responsible for relatively few children.

Density

The number of square feet of space per child.

Developmentally appropriate activity

As used in the National Child Care Staffing Study (Whitebook et al., 1990), this phrase refers to items such as furnishings, arrangement of physical space, toys and equipment, activities, and policies which are appropriate for the developmental level of the children.

Early Childhood Environment Rating Scale

An instrument which is completed on-site and examines the extent and/or appropriateness of the following program dimensions: personal care routines for children; creative activities; language/reasoning activities; furnishings and equipment and their use; fine and gross motor activities; the stimulation of social development; and the way in which the needs of adults (parents and caregivers) are met.

Informative verbal exchange

A desirable caregiver behaviour which involves activities such as giving explanations and/or reasons when asking a child to do something, explaining activities, reading to the child, and other forms of verbal and cognitive stimulation.

Federal interagency day care requirements (FIDCR)

A set of child care standards issued by the United States' federal government in 1980 and based on extensive consultation with experts in the field. They were intended to establish a threshold of safe care for children in federally subsidized programs. However, they never actually became law.

Mean

A measure of the average score for a sample on a particular variable. It is calculated by taking the sum of all the scores and dividing it by the total number of subjects.

Median

The score on a particular variable which divides the sample into half with 50% of the subjects achieving a score above the median and 50% below it.

Positive caregiver interaction

Caregiver behaviour which is characterized by high levels of positive interaction, e.g. the adult shows active interest in the child's activities, the caregiver provides the child with encouragement.

Responsiveness

Caregivers who are responsive react appropriately and promptly to the child's verbal or non-verbal bids for attention, answer children's questions, initiate activities which are geared to the child's current developmental level, and are sensitive to changes in the child's mood.

Sensitivity

Caregivers who are sensitive are aware of the child's developmental level and current mood and behave in a fashion which is consistent with this awareness.

Sponsorship

In Ontario, family-based child care providers sometimes operate under the sponsorship of an agency. In these situations, the agency matches the child and caregiver and provides on-going supervision.

Statistically significant (or significant)

The research finding of a relationship between two items which is unlikely to have occurred simply by chance. Therefore, it is assumed that the relationship is due to the influence of one item on the other. The lowest level of significance is .05, this means that the probability of the relationship having occurred by chance is less than 5 in 100.

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Appendix A

KEY INFORMANTS

CANADA

a) Governments

o Federal

Mr. Howard Clifford, Child Care Programs
Health and Welfare Canada

o Manitoba

Mrs. Mary Humphrey

o Nova Scotia

Mr. Gregory Gammon
Director, Child Care Services

o Saskatchewan

Ms Tara Truemner
Policy Analyst, Child Care Branch

o Ontario

Mrs. Fran Moscall
Policy Advisor, Minister Responsible for Native Affairs

Ms Julie Mathien and Ms Elizabeth Terry
Centre for Early Childhood and Elementary Education
Ministry of Education

Ms Marna Ramsden
Director, Children's Services
The Municipality of Metropolitan Toronto

b) Universities

o Concordia University, Montreal

Dr. Ellen Jacobs and Dr. Nina Howe
Department of Early Childhood Education

Dr. Donna White
Department of Psychology

- University of Guelph

  Dr. Donna Lero
  Department of Family Studies

- University of Manitoba

  Dr. Lois Brockman
  Department of Family Studies

- Ryerson Polytechnical Institute

  Mrs Ann Ellison, Ms June Deller Pollard, and
  Mr. Garry Woodhill
  Department of Early Childhood Education

- University of Toronto

  Dr. Andrew Biemiller
  Institute of Child Study

  Mrs. Martha Friendly
  Childcare Resource and Research Unit

- University of Victoria

  Dr. Alan Pence
  School of Child Care

c) Colleges

- Centennial College, Toronto

  Ms Carolyn Warberg
  Early Childhood Education

- Confederation College, Thunder Bay

  Ms Barbara Elliott
  Early Childhood Education

- George Brown College, Toronto

  Mrs. Karen Chandler and Mrs. Pam Doyle-Easton
  Early Child Hood Education

d) Associations

- Association for Early Childhood Education - Mrs. Carolyn Winter
- Canadian Child Care Federation - Ms Diana Smith
- Canadian Day Care Advocacy Association - Mrs. Suzanne Potvin
- Committee of Councils of Parent Participation - Mrs. Ruth Zant
- Manitoba Child Care Association - Mrs. Dorothy Dudek
- Ontario Coalition for Better Day Care - Ms Janet Davis
- Ontario Municipal Social Services Association (OMSSA) - Mrs Karen Chan (Halton), Ms Sarah Graham (staff), Mrs. Doreen Gordon (York), and Mrs. Jane Van Berkel (Peel)
- Ontario Metis and Aboriginal Association - Ms Toby Turner
- Ontario Native Women's Association - Ms Marlene Pierre
- Private Home Day Care Association of Ontario - Mrs. Leslie Atkinson

e) Other

- Miss Irene Kyle
- Ms Brenda Sissons, "Choosing with Care Project"
- Dr. Karen Oster and Staff - Play and Learn Nursery School
- Mrs. Margaret Pollard - Ontario Association for Community Living
- Mrs. Clara Will and Staff - Adventure Place
- Ms Carolyn Wolpert - Infant Mental Health Promotion Project, Hospital for Sick Children, Toronto

UNITED STATES

a) Researchers

- Dr. Richard Fiene
  Professor of Child Care and Early Education
  Pennsylvania State University at Harrisburg

- Dr. Thelma Harms
  Frank Porter Graham Child Development Centre
  University of North Carolina at Chapel Hill

- Dr. Carollee Howes
  Graduate School of Education
  University of California, Los Angeles

- Dr. Gwen Morgan
  Wheelock College
  Boston

- Dr. Deborah Phillips
  Psychology Department
  University of Virginia

- Dr. Marcy Whitebook
  Child Care Employee Project
  Oakland, California

b) Other

- Ms Gina Adams
  Children's Defense Fund, Child Care Unit
  Washington, D.C.

- Ms Pauline Koch
  Director of Licensing, Delaware and
  Vice President, National Association for Regulatory Administrators

- Ms Debbie DiGuilo
  Child Care Standards Project
  American Public Health Association/American Academy of Paediatrics

ENGLAND

- Dr. Peter Moss
  Thomas Coram Research Unit
  University of London Institute of Education

Letters seeking unpublished materials were also sent to the following:

- Ms Pauline Peters
  Director, Community Day Programs
  Alberta

- Mrs. Fran Pardee
  Day Care and Infant Development Program
  British Columbia

- Ms Vivian Randell
  Director of Day Care and Homemaker Services
  Newfoundland

- Mrs. Kathy Rochon
  Day Care Coordinator
  Prince Edward Island

- Mme. Nicole Marcotte
  Office des services de garde a l'enfance
  Quebec

- Ms Donna Young
  Child Care Branch
  Saskatchewan

- Ms Teresa Wilson
  Consultant on Day Care
  North West Territories

- Ms Debbie Mauch
  Day Care Coordinator
  Yukon

- Dr. Kim Kienappel
  Child Studies Department
  Mount St. Vincent University, Nova Scotia

- Mr. Ken Jaffe
  International Child Resource Institute
  Berkeley, California

- National Association for the Education of Young Children
  Washington, D.C.

- Professor Edward Zigler
  Psychology Department, Yale University

- Mrs. Helen Penn
  National Child Care Campaign
  London, England

- Mrs. Sue Owen
  National Childminding Association
  England

- Dr. Elsa Ferri
  National Children's Bureau
  London, England

- Dr. Marie-Louise Annerblom
  Department of Educational and Psychological Research
  University of Lund, Sweden

- Dr. Bengt-Erik Andersson
  Department of Educational Research
  Stockholm Institute of Education, Sweden

Appendix B

INTERVIEW PROTOCOL

1. What do you think are the program-specific indicators most associated with quality, e.g. group size, caregiver-to-child ratio?

2. How would you rank program-specific indicators in terms of their relative importance?

3. Are there certain combinations of program-specific indicators which you believe are more important for quality than others?

4. Are there program-specific indicators which are more important:

   - at a certain age, e.g. infants or school-aged
   - in family-based as opposed to centre-based settings
   - for children with certain types of backgrounds, e.g developmentally handicapped children

5. How can program-specific indicators associated with quality be measured?

6. How can program-specific indicators associated with quality be maintained?

7. What contextual factors do you think have an impact on quality?

8. Are you aware of any innovative approaches or models to meet the special needs of:

   - seasonal workers, such as farmers
   - immigrant children